



formation Update

Manitoba
Agriculture



**Guidelines For Estimating
Cow-Calf
Production Costs
Based on a 150 Head Cow Herd**

DATE: September, 2001

This guide is designed to provide you with planning information and a format for calculating costs of production of a cow-calf enterprise. The production costs included in this enterprise budget are not intended as a cost study of the beef industry in Manitoba.

The budget estimates are based on a number of assumptions which are clearly defined in the supporting pages. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms; the farm over time; or comparing the plan with the actual production at the end of the planning period. Fixed costs are based on estimates of new costs.

The budget may be adjusted by putting your figures in the appropriate column. Each cow-calf producer is encouraged to determine their own costs of production based on their own inputs, pasture program, and management.

Cow-Calf Production Costs 2001 Based on a 150 Cow Herd

A. Operating Costs	Cost/Cow	Total Cost	Your Cost
1. Feed Costs			
1.01 Grain	10.20	1,530	
1.02 Hay	181.50	27,225	
1.03 Salt & Minerals	17.85	2,678	
Total Feed Cost	\$209.55	\$31,433	
2. Other Operating Costs			
2.01 Straw	20.00	3,000	
2.02 Veterinary Medicine & Supplies	19.37	2,906	
2.03 Breeding Costs	26.84	4,026	
2.04 Fuel, Maintenance & Repairs	26.67	4,001	
2.05 Utilities	9.33	1,400	
2.06 Marketing & Transportation	25.55	3,833	
2.07 Death Loss	14.00	2,100	
2.08 Manure Removal	10.00	1,500	
2.09 Insurance	11.27	1,691	
2.10 Herd Replacement	39.00	5,850	
2.11 Miscellaneous	5.00	750	
Subtotal Operating Costs	416.58	\$62,490	
2.12 Operating Interest	15.62	2,343	
Total Operating Costs	\$432.20	\$64,833	
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	12.72	1,908	
3.02 Machinery & Equipment	39.47	5,921	
4. Investment			
4.01 Buildings	5.09	763	
4.02 Machinery & Equipment	11.84	1,776	
4.03 Livestock	56.00	8,400	
4.04 Pasture Land & Fencing	51.59	7,738	
Total Fixed Costs	\$176.70	\$26,506	
Total Operating and Fixed Costs	\$608.91	\$91,339	
C. Labour	90.00	13,500	
Total Cost of Production	\$698.91	\$104,839	

Breakeven price	\$/cwt
A. Operating Costs	\$80.82
B. Operating & Fixed Costs	\$113.87
C. Operating, Fixed & Labour Costs	\$130.70

Breakeven Price \$/cwt = Cost + 93% calf crop + calf weight (5.75cwt)

Assumptions

1. This budget outlines the cost of production for a cow calf operation with 150 cows 6 bulls and 93% calf crop weaned.
2. Building and equipment are valued at new cost.
3. All feed is valued at market value.
4. Manure removal is contracted out.
5. Replacement heifers are valued at fair market value.
6. This budget assumes an 'average' weaning weight of 575 lbs. (steer 'calves' 600 lbs and heifer calves 550 lbs.

Cow-Calf Production Worksheet

A. Operating Costs

1. Feed Costs

1.01 Barley (processed)

	3.0	lbs barley/cow/day	_____
x	60	days/year	_____
÷	48	lbs/bu	_____
x	<u>\$2.72</u>	/bushel	_____
=	\$10.20	/cow	_____

1.02 Hay (for cows)

	2.5	tons good quality	_____
x	<u>\$55.00</u>	/ton	_____
=	\$137.50	/cow	_____
	1.1	tons low quality	_____
x	<u>\$40.00</u>	/ton	_____
=	\$44.00	/cow	_____

Total	=	\$181.50	/cow	_____
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1.03 Salt and Minerals

	35.0	lbs salt/cow/year	_____
x	<u>\$0.15</u>	/lb	_____
=	\$5.25	/cow	_____

	35.0	lbs mineral/cow/year	_____
x	<u>\$0.36</u>	/lb	_____
=	\$12.60	/cow	_____

Total	=	\$17.85	/cow	_____
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2. Other Operating Costs**2.01 Straw**

	1.0	tons/cow/year	
x	<u>\$20.00</u>	/ton	
=	\$20.00	/cow	

2.02 Veterinary Medicine & Supplies**Calf Medication**

	\$0.55	/calf blackleg	
x	<u>93.0</u>	% calf crop	
=	\$0.51	/cow	

Cow Medication

	\$2.30	/cow IBR	
+	\$2.90	/cow Scourguard 3	
+	\$7.50	/cow footrot,louse	
+	<u>\$0.64</u>	/cow ADE	
=	\$13.34	/cow	

Herd Health Program

	\$90.00	/hour charge	
x	6	hours	
÷	<u>150</u>	cows	
=	\$3.60	/cow	

Mileage

	\$0.90	/km charge	
x	80	kilometres	
x	4	visits	
÷	<u>150</u>	cows	
=	\$1.92	/cow	

Total = \$19.37 /cow

2.03 Breeding Costs**Feed for Bulls****Hay**

	4.0	tons good quality	
x	<u>\$55.00</u>	/ton	
x	6	bulls	
÷	<u>150</u>	cows	
=	\$8.80	/cow	

Barley		8.0	lbs barley/bull/day	_____
x		120	days	_____
÷		48	lbs/bu	_____
x		\$2.72	/bushel	_____
x		6	bulls	_____
÷		<u>150</u>	<u>cows</u>	_____
=		\$2.18	/cow	_____
Total	=	\$10.98	/cow	_____
Straw for Bulls		1.0	tons/bull/year	_____
x		\$20.00	/ton	_____
x		6	bulls	_____
÷		<u>150</u>	<u>cows</u>	_____
=		\$0.80	/cow	_____
Vet & Medicine for Bulls		\$49.00	semen test	_____
+		\$15.00	total vet cost/bull	_____
x		6	bulls	_____
÷		<u>150</u>	<u>cows</u>	_____
=		\$2.56	/cow	_____
Replacement of Bulls		\$2,500	bull cost	_____
-		\$1,800	bull salvage value	_____
x		25.00	% replacement rate	_____
x		6	bulls	_____
÷		<u>150</u>	<u>cows</u>	_____
=		\$7.00	/cow	_____
Investment in Bulls		\$2,500	bull cost	_____
+		\$1,800	bull salvage value	_____
÷		2		_____
x		4.0	% investment rate	_____
x		6	bulls	_____
÷		<u>150</u>	<u>cows</u>	_____
=		\$3.44	/cow	_____

Buildings & Pasture Costs for Bulls

		\$51.59	/bull pasture cost	_____
x		6	bulls	_____
+		<u>150</u>	<u>cows</u>	_____
=		\$2.06	/cow	_____
Total	=	\$26.84	/cow	_____

2.04 Fuel, Oil, Repairs & Maintenance**Machinery**

		\$1,300	annual fuel cost	_____
+		\$1,200	oil, repairs & maintenance	_____
+		<u>150</u>	<u>cows</u>	_____
=		\$16.67	/cow	_____

Buildings, Fences etc.

		\$1,500	repairs & maintenance	_____
+		<u>150</u>	<u>cows</u>	_____
=		\$10.00	/cow	_____

Total	=	\$26.67	/cow	_____
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2.05 Utilities

		\$1,400	annual cost	_____
+		<u>150</u>	<u>cows</u>	_____
=		\$9.33	/cow	_____

2.06 Marketing & Transportation**Trucking**

Calves		140	calves	_____
x		575	lbs/calf	_____
x		\$1.25	/cwt (trucking cost)	_____
+		<u>150</u>	<u>cows</u>	_____
=		\$6.68	/cow	_____

Cull Cows		20	cull cows	_____
-		2	cows died	_____
x		1,350	lbs/cow	_____
x		\$1.25	/cwt (trucking cost)	_____
+		100	lbs/cwt	_____
+		<u>150</u>	<u>cows</u>	_____
=		\$2.03	/cow	_____

Selling Commission

Calves

	140	calves
x	\$15.75	/calf
÷	<u>150</u>	<u>cows</u>
=	\$14.65	/cow

Cull Cows

	20	cull cows
-	2	cows died
x	\$18.25	/cow
÷	<u>150</u>	<u>cows</u>
=	\$2.19	/cow

Total = \$25.55 /cow

2.07 Death Loss

x	\$1,400	/cow investment
x	<u>1.0</u>	<u>% mortality rate</u>
=	\$14.00	/cow

2.08 Manure Removal

	\$1,500	annual removal cost
÷	<u>150</u>	<u>cows</u>
=	\$10.00	/cow

2.09 Insurance

	\$1,400	\$/cow investment
x	\$0.45	/\$100 capital
÷	<u>100</u>	<u>/100</u>
=	\$6.30	/cow

\$119,156 building and equipment
investment

x	\$0.60	/\$100 capital
÷	100	/100
÷	<u>150</u>	<u>cows</u>
=	\$4.77	/cow

	\$30.00	liability
÷	<u>150</u>	<u>cows</u>
=	\$0.20	/cow

Total = \$11.27 /cow

2.10 Herd Replacement

	\$1,200	/replacement heifer	_____
-	\$900	/cull cow	_____
x	<u>13.00</u>	<u>% replacement rate</u>	_____
=	\$39.00	/cow	_____

2.11 Miscellaneous

	\$750	total office expenses	_____
+	<u>150</u>	<u>cows</u>	_____
=	\$5.00	/cow	_____

2.12 Operating Interest

(Operating interest is charged on one half of the subtotal operating costs)

	\$416.58	subtotal operating costs	_____
+	2	average	_____
x	<u>7.5</u>	<u>% operating interest</u>	_____
=	\$15.62	/cow	_____

Capital Costs

Buildings & Water System

Windbreak Fence	\$2,380
Feedlot Fence	\$2,392
Calf Shelters	\$6,144
Handling Facilities	\$3,500
Calving Barn (30'x32')	\$9,600
Waterers (3 @ \$ 1000)	\$3,000
Pasture watering system	\$4,000
Pasture water source	\$3,000
Gates	\$840
Round Bale Feeders	\$900
Well & Pressure System	\$3,500
Hydro (6 poles @ \$400)	\$2,400
Storage Bins	\$3,500
Total Building Cost	\$45,156

Machinery & Equipment

Miscellaneous Machinery	\$5,000
Tractor & Loader (\$100,000 @30%)	\$30,000
Bale Shredder	\$12,000
Stock Trailer	\$12,000
Truck (\$30,000 @ 50%)	\$15,000
Total Machinery & Equipment Cost	\$74,000

Total Bldg., Mach. & Equip. **\$119,156**

Total Breeding Herd Value **\$210,000**

Total Capital Investment **\$329,156**

B. Fixed Costs

3. Depreciation

Original Cost - Salvage Value
Useful l ife

3.01 Buildings & Water System (not including pasture water system)

	\$38,156	original cost
-	0	salvage value
÷	20	years useful life
÷	150	cows
=	\$12.72	/cow

3.02 Machinery & Equipment

	\$74,000	original cost	_____
-	\$14,800	salvage value	_____
÷	10	years useful life	_____
÷	<u>150</u>	<u>cows</u>	_____
=	\$39.47	/cow	_____

4. Investment

Original Cost + Salvage Value x Investment Rate
2

4.01 Buildings

	\$38,156	original cost	_____
+	\$0.00	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>150</u>	<u>cows</u>	_____
=	\$5.09	/cow	_____

4.02 Machinery & Equipment

	\$74,000	original cost	_____
+	\$14,800	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>150</u>	<u>cows</u>	_____
=	\$11.84	/cow	_____

4.03 Livestock

	\$1,400	/cow	_____
x	4.0	% investment rate	_____
=	\$56.00	/cow	_____

4.04 Pasture**A. Marginal Land Investment**

Land	5.00	acres/cow	_____
x	\$175.00	/acre	_____
x	<u>4.0</u>	<u>% investment rate</u>	_____
=	\$35.00	/cow	_____

Fence

	\$13,440	total fence investment
+	\$0	salvage value
÷	2	average
x	4.0	% investment rate
÷	<u>150</u>	<u>cows</u>
=	\$1.79	/cow

Pasture Water System

	\$7,000	system & source
+	\$0	salvage value
÷	2	average
x	4.0	% investment rate
÷	<u>150</u>	<u>cows</u>
=	\$0.93	/cow

Total Investment= \$37.73 /cow

Depreciation**Fence**

	\$13,440	total fence investment
-	\$0	salvage value
÷	20	years useful life
÷	<u>150</u>	<u>cows</u>
=	\$4.48	/cow

Water system

	\$7,000	system & dugout
-	\$0	salvage value
÷	20	years useful life
÷	<u>150</u>	<u>cows</u>
=	\$2.33	/cow

Total = \$6.81 /cow

Taxes

	5.00	acres/cow
x	<u>\$0.50</u>	<u>/acre</u>
=	\$2.50	/cow

Total = \$47.04 /cow

B. Crop Land Investment**Land**

	3.00	acres/cow
x	\$325	/acre
x	<u>4.0</u>	<u>% investment rate</u>
=	\$39.00	/cow

Fence

	\$8,640	total fence investment
+	\$0	salvage value
+	2	average
x	4.0	% investment rate
÷	<u>150</u>	<u>cows</u>
=	\$1.15	/cow

Pasture Water System

	\$7,000	system & source
+	\$0	salvage value
+	2	average
x	4.0	% investment rate
÷	<u>150</u>	<u>cows</u>
=	\$0.93	/cow

Total Investment= \$41.09 /cow

Depreciation

Fence

	\$8,640	total fence investment
-	\$0	salvage value
÷	20	years useful life
÷	<u>150</u>	<u>cows</u>
=	\$2.88	/cow

Water system

	\$7,000	system & source
-	\$0	salvage value
+	20	years useful life
÷	<u>150</u>	<u>cows</u>
=	\$2.33	/cow

Total = \$5.21 /cow

Taxes

	3.0	acres/cow
x	<u>\$5.00</u>	<u>/acre</u>
=	\$15.00	/cow

Total = \$61.30 /cow

C. Crown Land:**Depreciation**

Fence		9.38	miles of fence	
x		\$1,920	/mile	
=		\$18,000	fence cost	
-		\$1,800	salvage value	
+		20	years useful life	
÷		<u>150</u>	<u>cows</u>	
=		\$5.40	/cow	
Water system		\$7,000	system & source	
-		\$0	salvage value	
+		20	years useful life	
÷		<u>150</u>	<u>cows</u>	
=		\$2.33	/cow	
Total Depreciation =		\$7.73	/cow	

Investment

Fence		\$18,000	fence cost	
+		\$1,800	salvage value	
=		\$19,800	total invested	
÷		2	average	
x		4.0	% investment rate	
÷		<u>150</u>	<u>cows</u>	
=		\$2.64	/cow	
Pasture Water System		\$7,000	system & source	
+		\$0	salvage value	
÷		2	average	
x		4.0	% investment rate	
÷		<u>150</u>	<u>cows</u>	
=		\$0.93	/cow	
Total Investment =		\$3.57	/cow	

Land Rental (includes taxes)

		\$246	/quarter, rental rate	
÷		<u>12</u>	<u>cows/quarter</u>	
=		\$20.50	/cow	
Total	=	\$31.80	/cow	

D. P.F.R.A.: Community Pasture Grazing**Cows**

		\$0.36	cost/cow/day	_____
x		<u>140</u>	<u>days</u>	_____
=		\$50.40	/cow	_____

Calves

x		\$17.00	/calf/season	_____
x		140	calves on pasture	_____
+		<u>150</u>	<u>cows on pasture</u>	_____
=		\$15.81	/cow	_____

Total	=	\$66.21	/cow	_____
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Average (a,b,c,d)	=	\$51.59	/cow	_____
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C. Labour

		9.0	hours/cow/year	_____
x		<u>\$10.00</u>	<u>/hour</u>	_____
=		\$90.00	/cow	_____

For further information contact your local Manitoba Agriculture and Food office.

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Cow-Calf Operating Facilities

